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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,578	01/29/2004	Craig L. Hill	50508-1053	6188
24504	7590	06/09/2006	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP			PAK, JOHN D	
100 GALLERIA PARKWAY, NW			ART UNIT	PAPER NUMBER
STE 1750				1616
ATLANTA, GA 30339-5948				

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/767,578	HILL ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	JOHN PAK	1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 March 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 82-96 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 82-96 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

Claims 82-96 are pending in this application.

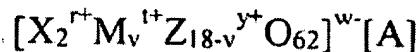
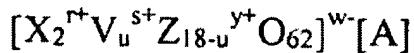
Applicant's election without traverse of the invention of Group I in the response filed on 3/27/2006 is acknowledged. Accordingly, claims 82-96 will presently be examined to the extent that they read on the formula of claim 83, wherein X is phosphorus. All other claimed subject matter are withdrawn from further consideration as being directed to non-elected subject matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 83-84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant recites two related formulas in claims 83-84:



The problem with these formulas is that the subscripts and superscripts are not all defined – the claimed subject matter is therefore indefinite. In a non-limiting example, the value of " $u$ " and " $y$ " in the first formula is not defined.

Also, the formula in claim 84 is not properly dependent on claim 83 since claim 83 requires a vanadium, whereas the formula in claim 84 does not have to have a vanadium. This is confusing because the above interpretation of claim 84 could be altered if the subscript v in the formula of claim 84 is meant to be for vanadium only.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 82-84, 91-92 and 95-96 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 442663.

EP 442663 explicitly discloses  $K_8HP_2W_{15}V_3O_{62}$  as an anti-viral and anti-HIV agent (page 1 & Example 17 on page 14). Broader formula of  $P_2W_{18-a}M^{a'}O_{62-b}$  is disclosed (claim 1, part e), as well as  $[P_2W_{15}V_3O_{62}]^9$  (claim 7). Topical administration as an ointment and cream is disclosed (page 16, lines 46-47).

It is the Examiner's position that the anti-viral activity of the composition would necessarily function in "removing a contaminant from an environment," as claimed by applicant. The 0.01-95 wt% weight limitation of the POM (claim 89) is noted but such broad amount would have been obvious from the various formulation types disclosed by the cited references. An ointment or cream necessarily contains sufficient amount of excipients such that an amount within 0.01-95 wt% of POM would have been obtained.

The “environment comprises a gas phase” (claim 92) does not appear to distinguish the environment in which the ointment or cream of the cited reference would function since said ointment or cream would function while in contact with air. The temperature and partial pressure of the contaminant from the gas phase features (claims 95-96) are noted but the temperature range is within ambient range and the prior art ointment or cream would necessarily remove such a contaminant since said ointment or cream would be exposed to the ambient conditions.

For these reasons the claims are deemed to be anticipated.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 85-89, 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 442663 in view of Bollens et al. (US 5,459,165).

EP 442663 explicitly discloses K<sub>8</sub>HP<sub>2</sub>W<sub>15</sub>V<sub>3</sub>O<sub>62</sub> as an anti-viral and anti-HIV agent (page 1 & Example 17 on page 14). Broader formula of P<sub>2</sub>W<sub>18-a</sub>M<sup>“a</sup>O<sub>62-b</sub> is disclosed (claim 1, part e), as well as [P<sub>2</sub>W<sub>15</sub>V<sub>3</sub>O<sub>62</sub>]<sup>9</sup> (claim 7). Topical administration

as an ointment and cream is disclosed (page 16, lines 46-47). "Suitable diluents, carriers, excipients and other components are known" (page 16, lines 45-46).

Bollens et al. (Bollens, hereinafter) disclose perfluoropolyethers as being known in the cosmetic field to protect the skin (column 1, lines 16-18). Bollens disclose improved perfluoropolyethers that can be used at 0.1-50 wt% to formulate cosmetic or pharmaceutical creams and lotions (column 3, lines 19-56) with good persistent effect (column 1, lines 22-23). Combination with other surface active agents is taught (column 3, last full paragraph). Numerous such other surface active agents are disclosed, including those that have unfluorinated polyether structures, such as polyglycerol alkyl ether (column 4, line 25).

EP 442663 does not explicitly disclose a perfluorinated polymer as a topical carrier. However, the ordinary skilled artisan would have been motivated to utilize Bollens' perfluoropolyethers, with or without another carrier such as an unfluorinated polyether, because they have been taught to be useful in formulating creams and lotions, protecting the skin, and providing persistent effect by Bollens. The ordinary skilled artisan would have been motivated to obtain the benefits of Bollens' carrier system with the expectation that the resultant ointments and creams would possess improved formulation characteristics as suggested by Bollens.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because

every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

WO 95/11033 is cited to further show the state of the art POM art relative to the elected subject matter.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is **(571)272-1600**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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